

CLAIMS:

1. A grain bin sweep comprising:
an auger assembly including a shield which at least partially surrounds an auger;
and
a tractor drive frame assembly, the frame assembly comprising a front support beam, a pair of spaced apart truss sections, and rear support member extending between the truss sections; the truss sections, and front and rear support members defining an area sized to receive a tractor drive;
a first connecting member to the shield; and
a second connecting member mounted to the frame; said first and second connecting members being matable to connect the frame to the shield.
2. The grain bin sweep of claim 1 wherein one of said first and second connecting members comprises an opening and the other of said first and second connecting members is received in said opening.
3. The grain bin sweep of claim 2 and further including a connecting pin which passes through at least one surface of said first connecting member and at least into said second connecting member to prevent said first and second connecting members from becoming disconnected.
4. The grain bin sweep of claim 2 wherein said first connecting member comprises at least two spaced apart surfaces defining a gap therebetween; said second connecting member comprising a tab sized and shaped to be received in said gap.
5. The grain bin sweep of claim 4 wherein the gap opens upwardly, and the tab extends downwardly.

6. The grain bin sweep of claim 2 wherein the first connecting member comprises a back plate and a front plate, the front plate being spaced from the back plate by spacers, the front and back plates each including axially aligned openings; the tab including openings positioned to be axially aligned with the pocket front and back plate openings when the tab is received in the gap; the sweep further including a pin sized and shaped to extend through the front plate opening, the tab opening, and at least into the back plate opening.

7. The grain bin sweep of claim 6 wherein the front plate opening has a diameter greater than the back plate opening and the tab opening.

8. The grain bin sweep of claim 7 wherein the pin includes a first section sized to be received in the front plate opening and a second section sized to be received in the back plate opening; the pin second section being smaller in diameter than the pin first section, the pin defining a shoulder between its first and second sections, said shoulder having an outer diameter greater than the diameter of said tab opening.

9. The grain bin sweep of claim 8 wherein at least a portion of the front plate opening is threaded, the pin including first section being at least partially threaded to be threadedly received in the pocket front plate opening.

10. The grain bin sweep of claim 7 wherein said first connecting member includes a pair of opposed side plates, said shield being curved and said side plates having a back surface shaped complementarily to the curvature of the shield.

11. The grain bin sweep of claim 1 wherein said tractor drive frame assembly includes a first section which is connected to the shield and a second section which

connects to the first part; said frame first section defining a first portion of said frame truss sections and said frame second section defining the remainder of said frame truss sections.

12. The grain bin sweep of claim 11 wherein said truss sections of said frame first section define a pair of spaced apart rectangles and the truss sections of said frame second section define a pair of spaced apart triangles; said frame first section truss portion including a back member and said frame second section truss portion having a forward member; said truss portion members being connected together to connect said frame second section to said frame first section.

13. The grain bin sweep of claim 12 including fasteners which extend through said frame truss portion members to connect said frame first and second sections together.

14. A grain bin sweep comprising:
an auger assembly comprising a shield which at least partially surrounds an auger; and

a tractor drive frame assembly, the frame assembly comprising a front support beam, a pair of spaced apart truss sections, and rear support member extending between the truss sections; the truss sections, and front and rear support members defining an area sized to receive a tractor drive;

a plurality of pocket members mounted to one of said shield and said frame; said pocket members each including a first pair of spaced apart plates to define a gap between the front and back pocket plates; and

tabs extending from the other of said shield and said frame; the tabs being positioned to be aligned with the pockets and sized to be received in the pockets.

15. The grain bin sweep of claim 14 wherein said pockets are mounted to said shield; said pockets including side plates having a surface shaped complementarily to the shape of the shield surface, said side plates being shaped to maintain said pockets in a generally vertical orientation such that said gap opens upwardly.

16. The grain bin sweep of claim 14 wherein said pocket includes an opening in at least a first plate of the first pair of plates and said tab including an opening positioned to be aligned with said plate opening when said tab is received in said pocket gap; said grain bin sweep further including a pin which extends through said pocket plate opening and said tab opening.

17. The grain bin sweep of claim 16 wherein said pocket includes an opening in the second plate of said first pair of plates; said pin extending at least into said second plate opening.

18. The grain bin sweep of claim 17 wherein the opening of at least one of said plates of said first pair of plates is at least partially threaded, said pin including thread on a portion thereof sized and shaped to be threaded into said plate opening threaded portion.

19. The grain bin sweep of claim 18 wherein the threaded portion of said plate opening is defined by a nut fixed to front plate.

20. A grain bin sweep adapted to be assembled within a grain bin, the sweep comprising:

an auger assembly including a shield and an auger;

a tractor frame assembly comprising a frame first part and a frame second part;
a first connecting member on said auger assembly and a second connecting member on said frame assembly; said first and second connecting members being matable together to connect said frame assembly to said auger assembly
wherein, the sweep components are sized to fit through a small access opening to a grain bin, and wherein said first and second connecting members allow for the connection of said frame assembly to said auger assembly using only hand tools.